

## ALASKA REGIONAL SCIENTIFIC REVIEW GROUP

SRG members: Gregory O Corry-Crowe & Megan Williams (Co-Chairs), John Citta, Beth Concepcion, Thomas Doniol-Valcroze, Mike Miller, Lorrie Rea, Eric Regehr, Kate Stafford

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Assistant Administrator for Fisheries  
National Marine Fisheries Service  
1315 East-West Highway  
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transmitted by electronic mail

November 16, 2021

Dear Ms. Coit,

The Alaska Regional Scientific Review Group (AKSRG) held its annual meeting virtually on 1-3 March 2021. Our agenda included review of 2020 marine mammal stock assessment reports (SARs), updates from the United States Fish and Wildlife Service (USFWS), and research and policy updates from the National Marine Fisheries Service (NMFS) staff on issues associated with the status and assessment of Alaska's marine mammal stocks. Below please find the AKSRG's recommendations following the March 2021 meeting:

### General Recommendations

The SARs presented each year provide critical information on marine mammal stock status and commercial fishery interactions; however, the length of the SARs at times can make it difficult for stakeholders to identify key changes or key points for management decisions in the documents. **The AKSRG therefore recommends that NMFS consider adding a short Executive Summary before the Introduction in order to highlight key points and/or key changes in the SARs to make them more accessible to the public.**

In 2021, the AKSRG heard an informative presentation from the Tribal Government of the Aleut Community of St. Paul Island (ACSPI) regarding northern fur seal research in the Pribilof Islands. The dialogue afforded by the presentation added value to the meeting on a number of levels including: novel research, considering indigenous perspectives and increased transparency with

the SAR process. **The AKSRG recommends NMFS continue to invite participation from marine mammal Co-Management organizations at the AKSRG meetings for species for which we are conducting SAR reviews and/or hearing information updates on stock status.**

The AKSRG was appreciative of Jay ver Hoef's presentation regarding upcoming collaborations among different groups at MML and data integration for modeling at-sea densities of marine mammal stocks. Combining disparate data sets such as acoustics and/or Platforms of Opportunity (POPs) is essential to developing a more comprehensive understanding of ecosystem dynamics and how these dynamics drive marine mammal distributions and demographics. **The AKSRG commends the associated working group for initiating these collaborations and requests follow-up presentations as this work is developed.**

The AKSRG also wants to express its appreciation to NMFS staff for the updated abundance estimates that were presented this year in a number of SARs. The group is aware of the considerable amount of work and resources needed to conduct and analyze new surveys. Updating and improving abundance estimates is essential to Potential Biological Removal (PBR) estimation and allows for more robust management inference. Previous abundance estimates for several species (especially large whales) are only available for small subsets of the stocks' ranges. **In light of the 2021 PacMAPPS survey in the Gulf of Alaska and the anticipated ArMAPPS survey, the SRG would like to request additional information on how survey design was or will be chosen to address the most pressing data gaps (e.g., SEBS shelf beyond 70 m isobaths, Gulf of Alaska shelf to slope). Additionally, the group recommends that NMFS carefully consider the trade-offs between survey coverage and intensity, and prioritize species with missing or partial abundance estimates.**

### **USFWS Managed Species**

The AKSRG appreciates the presentations they received on northern and southern sea otters, Pacific walrus and Beaufort and Chukchi polar bears. These stocks are managed by USFWS and co-managers, and the stocks are responding to reductions in sea ice extent and quality through shifts in distribution and/or timing of haul outs. Additionally, all three species are taken as a subsistence resource by Alaska Native communities and Tribes. **In light of the considerable research on sea otters and Pacific walrus conducted at USFWS in the last five years, their importance as a subsistence resource, and the potential impacts associated with changing environmental conditions, the SRG recommends the USFWS update the SARs for sea otters and Pacific walrus in 2022 and 2023.**

Based on recent research and the 2021 SAR, the Southern Beaufort Sea polar bear stock is likely exhibiting declines in reproductive indices and abundance due to reductions in the availability

of sea ice and potential forage. We note the 2021 SAR utilizes an abundance estimate generated from 2001-2010 data to calculate the Minimum Population Estimate ( $N_{\text{MIN}}$ ). Importantly, data indicate that subsistence takes of Southern Beaufort Sea polar bear likely exceed the PBR suggesting there may be short- and long-term conservation concerns for this strategic stock. **The AKSRG recommends obtaining a new, up-to-date abundance estimate that can be used to better estimate  $N_{\text{MIN}}$  for the Southern Beaufort Sea polar bear SAR and also recommends annual updates to the SAR as new information on subsistence use becomes available.**

### **Bowhead Whales**

The bowhead whale SAR reviewed in 2021 uses an abundance estimate from 2011 although new abundance estimates exist based on two surveys in 2019: a spring ice-based survey and a summer aerial line-transect survey. **The SRG recommends that an updated abundance estimate be added to the bowhead whale SAR and that the updated bowhead whale SAR be reviewed again at the 2022 AKSRG meeting.**

**The AKSRG also recommends that MML consider exploring the use of population demographics from the aerial survey data (i.e. decadal-scale changes in the proportion of bowhead calves in the population and survivorship curves) to provide an alternative assessment of the overall health of the population or to estimate population growth.**

### **Cook Inlet Beluga Whales**

At the 2021 meeting, the AKSRG discussed the difficulties and uncertainties associated with estimating abundance of belugas in Cook Inlet using aerial surveys. In particular, there is substantial imprecision in the estimation of group size of large groups of whales and variability in estimates of abundance. **Given the difficulties involved with estimating abundance of belugas in Cook Inlet using aerial surveys, the SRG would like to receive an update on photo-based mark-recapture studies ongoing in Cook Inlet.**

The AKSRG also notes Cook Inlet belugas are a relatively data rich stock, however the mechanistic forces driving the continued decline in Cook Inlet belugas remain unclear. Stranded individuals and known mortalities may represent an important data point. **The AKSRG therefore recommends an evaluation of the demographics of stranded whales as it relates to Cook Inlet beluga whale population trends.**

### **Southeast Alaska Harbor Porpoise**

The draft 2021 Southeast Alaska (SEAK) harbor porpoise SAR presented new survey information; however, the corresponding abundance estimate was not corrected for the detection probability on the track line,  $g(0)$ . Since a double-platform approach was not possible during the survey, a correction factor was developed using a different method (analogous to Barlow 2015) and will be submitted to peer-review (Zerbini et al., in prep). **The AKSRG approved the draft 2021 SEAK harbor porpoise SAR, but the AKSRG requests that this correction factor be applied to the abundance estimate once the new information is published.**

**If results from recent genetic analyses confirm that a different stock structure is applicable for SEAK harbor porpoises, the AKSRG requests to review the corresponding SAR(s) as soon as possible.**

The AKSRG appreciates that setting research priorities within the NMFS is a complex interaction of funding and logistics and that both funds and personnel are limited. The AKSRG also notes it's critical that research projects on marine mammal stocks are aligned with both an evidence of need (e.g., if harvest or bycatch exceeds PBR) and a likelihood that management can be effective (e.g., bycatch mitigation is generally feasible). We applaud the work NMFS has done to-date to evaluate SEAK harbor porpoise; assessing abundance within SEAK and clarifying the genetic structure of the stock (and likely existence of a separate stock) are important steps. However, important questions remain, including: 1) how many porpoises occur in offshore waters; 2) what is the stock identity of porpoises offshore; 3) what are current bycatch rates of the southernmost population segment? Available evidence suggests that SEAK harbor porpoise bycatch is not sustainable, and the AKSRG is concerned that future studies are not currently planned, largely due to the lack of research dollars. **The AKSRG requests that NMFS continue to make harbor porpoise research in SEAK a priority such that research can inform effective management actions in a relevant timeframe.**

**In addition to the need for observer data to evaluate bycatch rates of SEAK harbor porpoise in state water fisheries, the AKSRG also recommends NMFS consider novel research platforms to improve Mortality and Serious Injury (M&SI) estimates, such as Electronic Monitoring platforms or thermal imagery.**

### **North Pacific right whales**

The North Pacific right whale is in danger of extinction and data limited. Research on this endangered population should be a NMFS priority. **The AKSRG requests that NMFS continue to identify specific actions: such as processing of existing acoustic data, maintenance of**

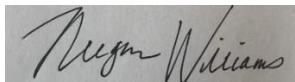
monitoring stations, and/or the development of novel Platforms of Opportunity, that could provide important data on endangered North Pacific right whales in a cost-effective manner.

### **Climate and Marine Mammals**

A number of fish stocks, including pollock, Pacific cod, and flatfish are shifting distributions north from the Eastern Bering Sea to the Northern Bering Sea due to climate change and warming conditions. As a result, some commercial fisheries have responded by shifting their fishing operations farther north as well. These shifts in prey resources and commercial fishery operations could have significant implications for marine mammals that rely on the Northern Bering Sea for summer breeding or foraging as well as migratory corridors (e.g. risk of bowhead whale entanglement in pot fishing gear). **The AKSRG requests a presentation from the Alaska Fisheries Science Center regarding recent shifts in the commercial fishery footprint by gear type in the Eastern Bering Sea and Northern Bering Sea as well as an evaluation of potential marine mammal-fisheries interactions that may arise in the Northern Bering Sea due to these environmental changes.**

Alaskan marine environments, from the Gulf of Alaska to the Arctic, have been experiencing biotic and abiotic changes at unprecedented rates. For example, 2014-2016 saw some of the warmest Sea Surface Temperatures on record in the Gulf of Alaska as part of a marine heatwave event, and sea ice extent in the Bering Sea in 2018 and 2019 was at the lowest levels on record and exhibited warming trends not predicted to occur by regional climate models for another 10-15 years. These exceptional warming conditions are impacting species at all trophic levels and are occurring at an order of magnitude capable of causing significant ecosystem production and function change. While climate change has been directly linked to changes in distribution, abundance or body condition of some fish species, seabirds and ice-associated marine mammals, the AKSRG notes that the implications of climate change are not well-established for many of the marine mammal stocks managed in the Alaska region. We also note that the NMFS is developing the Climate Fisheries Initiative, which does consider marine mammals and climate change. **The AKSRG requests an update from MML and the NMFS regarding marine mammal-climate change research as well as how this work fits into the Climate Fisheries Initiative. The AKSRG also recommends that MML and NMFS prioritize marine mammal-climate change research in the short- and long-term.**

Sincerely,

A handwritten signature in black ink, reading "Megan Williams", is displayed on a light gray rectangular background.

Megan J. Williams (AKSRG Co-Chair)